

# Laparoscopic Hysterectomy and Ileocecal Resection for Treatment of Endometriosis

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## ABSTRACT

Surgical therapy remains the mainstay for the treatment of endometriosis. In this case report, we review the surgical management of a patient who presented with a cecal implant of endometriosis. She was successfully treated with combined laparoscopic hysterectomy and ileocecal resection. The laparoscopic ileocecal resection was completed with an intracorporeal anastomosis and retrieval of the specimen through the vaginal cuff. This presentation demonstrates the feasibility of combined colon resection and hysterectomy as well as vaginal colon specimen extraction. The vagina as a colon specimen retrieval site has significant implications for the future of natural orifice colorectal surgery.

**Key Words:** Laparoscopic colectomy, Vaginal extraction, Colon endometriosis.

## CASE REPORT

A G<sub>2</sub>P<sub>2</sub> 40-year-old lady presented with a complaint of chronic dysmenorrhea. She had pelvic and right lower quadrant pain starting a week prior to and lasting for up to a week after her menstrual cycle. She also described diarrhea coinciding with her menstrual cycle. A pelvic ultrasound demonstrated no adnexal abnormalities. The uterus was normal with the exception of a 19-mm mass of the anterior fundus. Due to her persistent right lower quadrant pain, computed tomography with po and iv contrast was then performed. Her CT findings included a 3-cm cecal mass and the 19-mm uterine mass seen on ultrasound that was thought to represent a fibroid. Colonoscopy was then performed that was remarkable for an inflamed, ulcerated area in the cecum suggestive of an extrinsic mass. Biopsies of this area were consistent with a hyperplastic polyp and a benign lymphoid mucosal nodule.

Given the cyclical nature of her pain as well as the presence of the uterine and the cecal masses, there was a high suspicion for endometriosis. The patient elected to undergo laparoscopic hysterectomy/bilateral salpingo-oophorectomy and excision of the cecal mass. The decision to perform bilateral salpingo-oophorectomy was based on her desire for prophylaxis of ovarian cancer as well as definitive treatment for endometriosis.

At the time of surgery, the laparoscopic hysterectomy and bilateral salpingo-oophorectomy was completed first. A laparoscopic ileocecal resection was then performed.

A 12-mm trocar was placed at the umbilicus. Five-mm trocars were placed in the right lower quadrant (RLQ) and (LLQ), with the patient in the suprapubic position. Initial examination at surgery revealed normal uterus, tubes, and ovaries. Several implants of endometriosis were found in the posterior cul de sac and overlying the right uterosacral ligament. The right ovary was also adherent to the right ovarian fossa secondary to endometriosis. The hysterectomy and bilateral salpingo-oophorectomy was completed. The uterus was removed through the vagina. The vaginal cuff was left open. A lap pad was placed in the vaginal canal to maintain pneumoperitoneum. The terminal ileum and cecum were mobilized via the lateral to

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medial approach. Once the cecum and terminal ileum were adequately mobilized, then the bowel was resected. The Endocutter was placed through the 12-mm umbilical trocar and was used to divide the terminal ileum and ascending colon. The mesentery between the stapled bowel was divided with a Harmonic scalpel. The Endopouch was inserted through the 12-mm trocar. The bowel specimen was placed in the bag. The Endopouch was removed via the open vaginal cuff. An intracorporeal side-to-side ileocolic anastomosis was then created with the Endocutter. The opening for the stapler was closed with 2 layers of absorbable suture. The vaginal cuff was then closed with interrupted absorbable suture.

Final pathology of the cecum revealed extensive endometriosis and serosal adhesions. The ovaries and fallopian tubes were normal. The uterine endometrium was remarkable for a proliferative pattern. Leiomyoma were present in the myometrium.

The patient was seen in follow-up at 2 weeks, 6 weeks, 9 months, and 19 months. She remains pain free, and her cyclical diarrhea has resolved.

## DISCUSSION

Laparoscopic colectomy and laparoscopic hysterectomy are both fairly common minimally invasive procedures. However, they are rarely performed as a simultaneous procedure. Furthermore, removal of the colon specimen through the vaginal cuff has been described fewer than 5 times in the surgical literature.<sup>1-5</sup>

Although laparoscopic colon surgery shares many of the minimally invasive benefits of other laparoscopic procedures such as cholecystectomy and fundoplication, the need for a specimen extraction incision is a drawback. In this case, the vaginal cuff was simply left open following hysterectomy to allow for specimen removal. Wilson et al<sup>1</sup> recently described a technique for posterior colpotomy for specimen retrieval thus bypassing the need for a cutaneous extraction site.

Lakshman et al<sup>2</sup> described a series of 3 patients undergoing simultaneous laparoscopic hysterectomy and anterior resection of the recto sigmoid colon. Jadoul et al<sup>3</sup> de-

scribed combined hysterectomy and nephrectomy for severe endometriosis with vaginal extraction of the kidney.

The new era of Natural Orifice Transluminal Endoscopic Surgery (NOTES) procedures has the potential for another paradigm shift in surgery in a similar fashion to that of laparoscopic surgery. Multiple reports have demonstrated the possibility of the colon as an access point, but few have focused on colectomy as the procedure to be performed via NOTES. Whiteford et al<sup>4</sup> showed in a cadaver model that sigmoid colectomy can be performed with transanal endoscopic microsurgery equipment. However, colon division was still performed extracorporeally.

## CONCLUSION

This case report demonstrates the feasibility of combined ileocectomy and hysterectomy via the laparoscopic approach. Furthermore, this report demonstrates that colon specimen retrieval via the vagina is an acceptable alternative to a cutaneous extraction incision. As the technology for NOTES continues to develop, hybrid techniques such as this may bridge the learning curve from pure laparoscopy to NOTES.

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